

DATCP INSECT SURVEYS 2010 & OUTLOOK FOR 2011

Thruget

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WISCONSIN PEST SURVEY DATCP PEST SURVEY PROGRAM

- The Wisconsin Pest Survey Program was established in 1915 to:
 - Collect data on economic pests affecting WI crops
 - Detect exotic pests of regulatory significance
 - Support export certification
- Fields are selected objectively and pest levels are measured using standard sampling methods
- Survey results are published in the Wisconsin Pest Bulletin

WISCONSIN PEST SURVEY DATCP PEST SURVEY PROGRAM

Wisconsin PEST BULLETIN

your weekly source for first alerts, weather
and crop pest information for Wisconsin



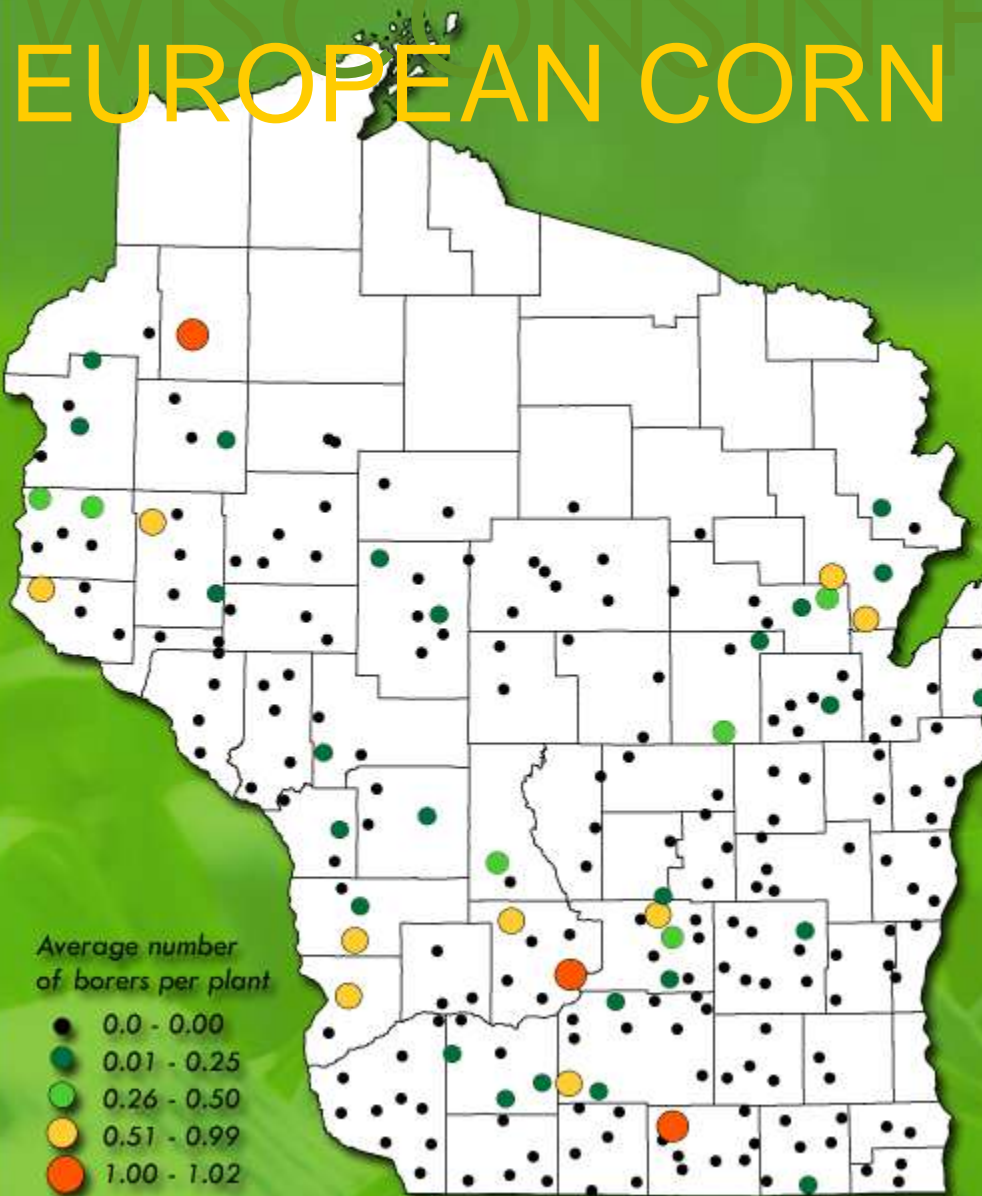
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INSECT SURVEYS 2010



- European corn borer
- Corn rootworm beetle
- Western bean cutworm
- True armyworm
- Soybean aphid
- Soybean defoliators

EUROPEAN CORN BORER SURVEY



Average number
of borers per plant

- 0.0 - 0.00
- 0.01 - 0.25
- 0.26 - 0.50
- 0.51 - 0.99
- 1.00 - 1.02

State Ave. No. Borers per Plant:

2010 0.07

2009 0.06

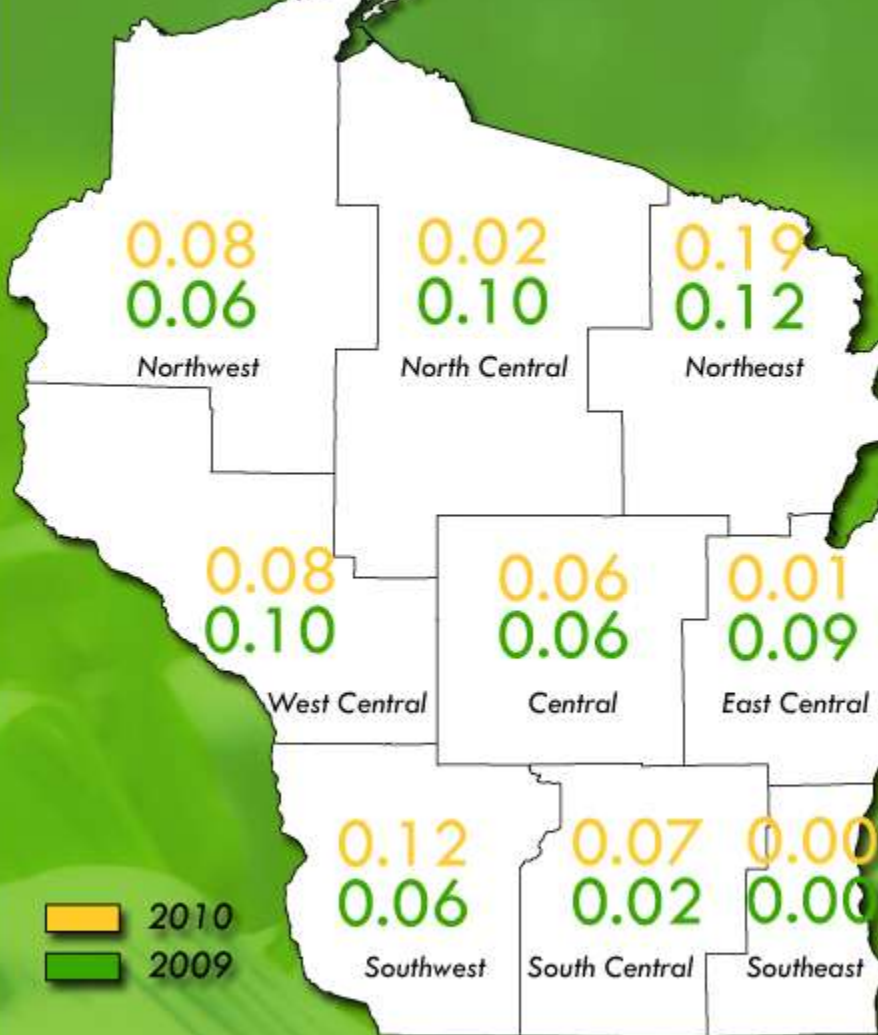
10-year 0.27

50-year 0.48

Threshold 1.00

Third lowest fall population since surveys began in 1942

EUROPEAN CORN BORER SURVEY



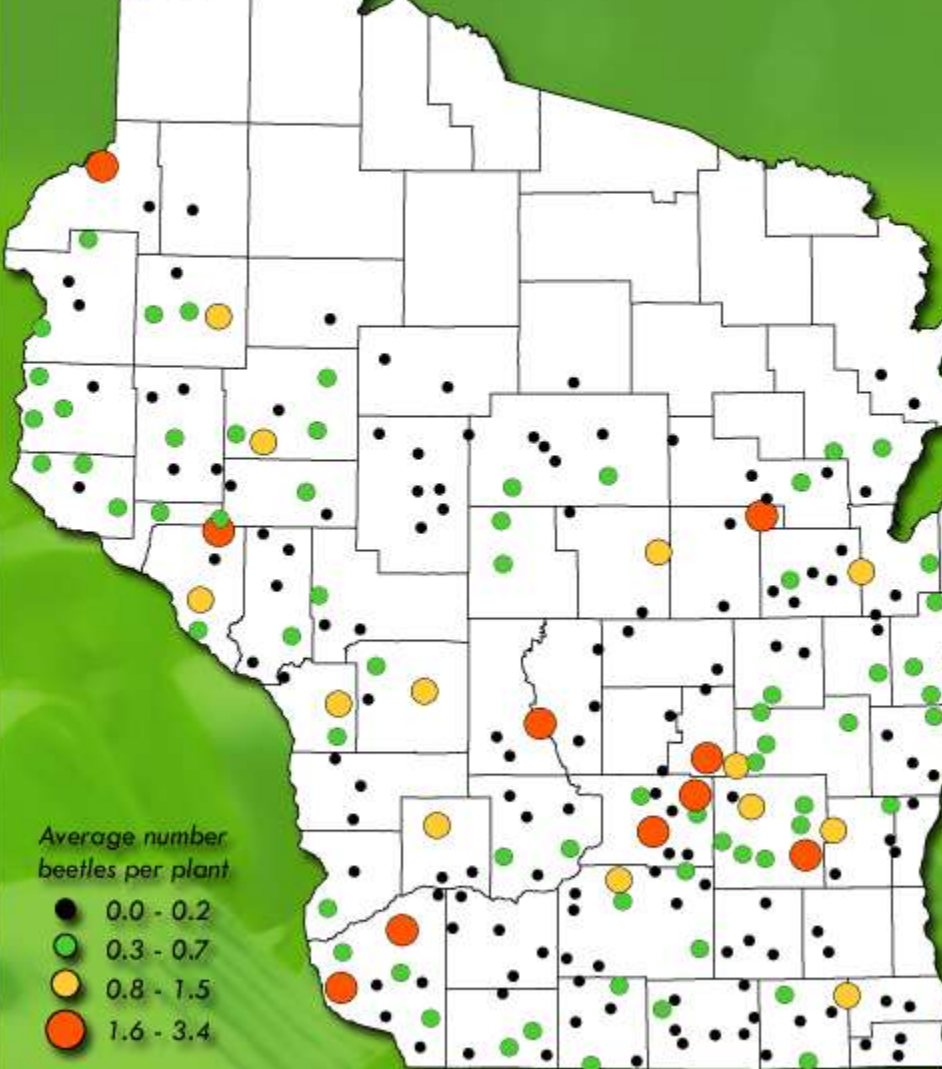
- Minor population increases in the SW, SC, NW and NE districts
- Only 1% of 229 fields had HIGH averages of > 1.0 borer per plant
- 81% of surveyed fields had no larvae or signs of infestation

CORN BORER OUTLOOK FOR 2011



- Populations in WI and Midwest are at historically low levels
- Widespread Bt corn use since late 1990s has helped to suppress populations
- Spring flight of moths next May-early June should be very small

CORN ROOTWORM SURVEY



- State Ave. No. Beetles per Plant:

2010 0.30

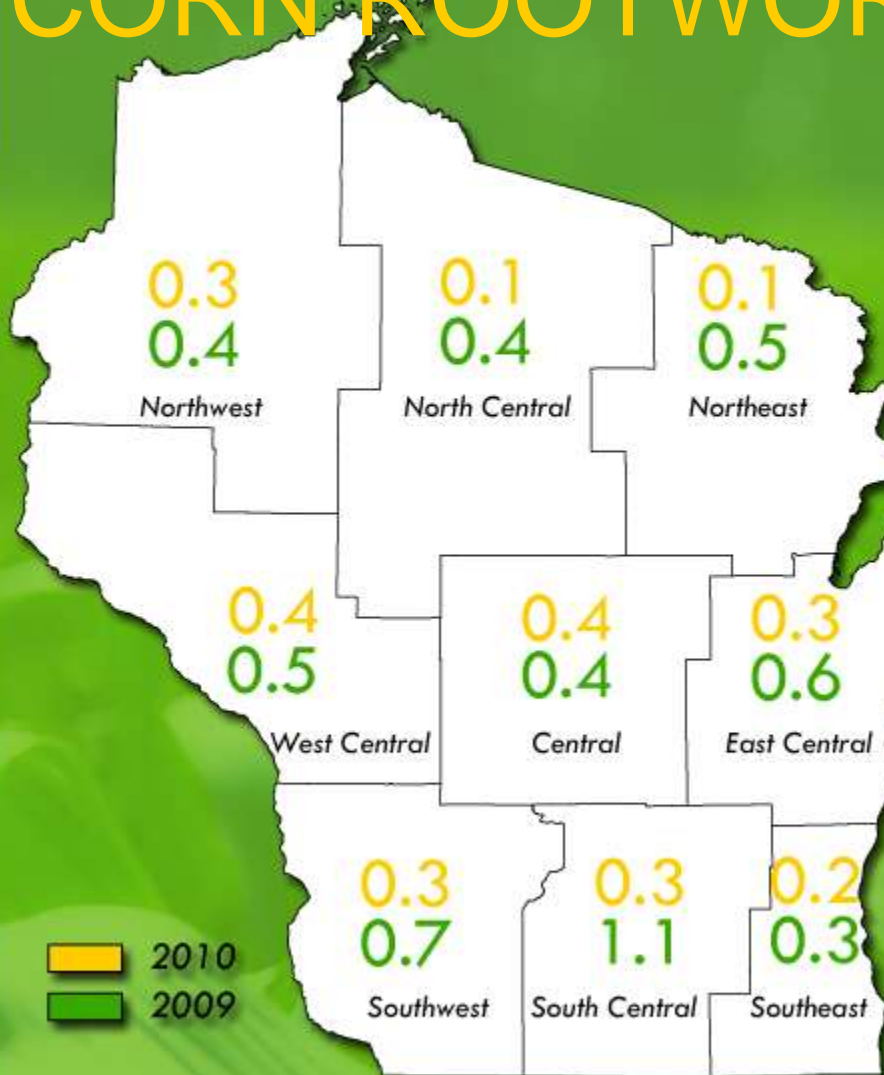
2009 0.60

10-year 0.80

Threshold 0.75

- Lowest beetle population since
prior to 1970

CORN ROOTWORM SURVEY



- Population decreases occurred in all districts, except CENTRAL
- Largest declines recorded in SC, SW and NE
- Only 10% sites had > 0.75 beetle per plant compared to 23% in 2009 and 38% in 2008

CORN ROOTWORM OUTLOOK 2011



- Beetle counts in 2010 were the lowest in 40 years
- Low beetle populations suggest most continuous corn is at LOW RISK for root injury in 2011, with a few exceptions
- Approx 10% of survey sites at HIGH risk for root injury

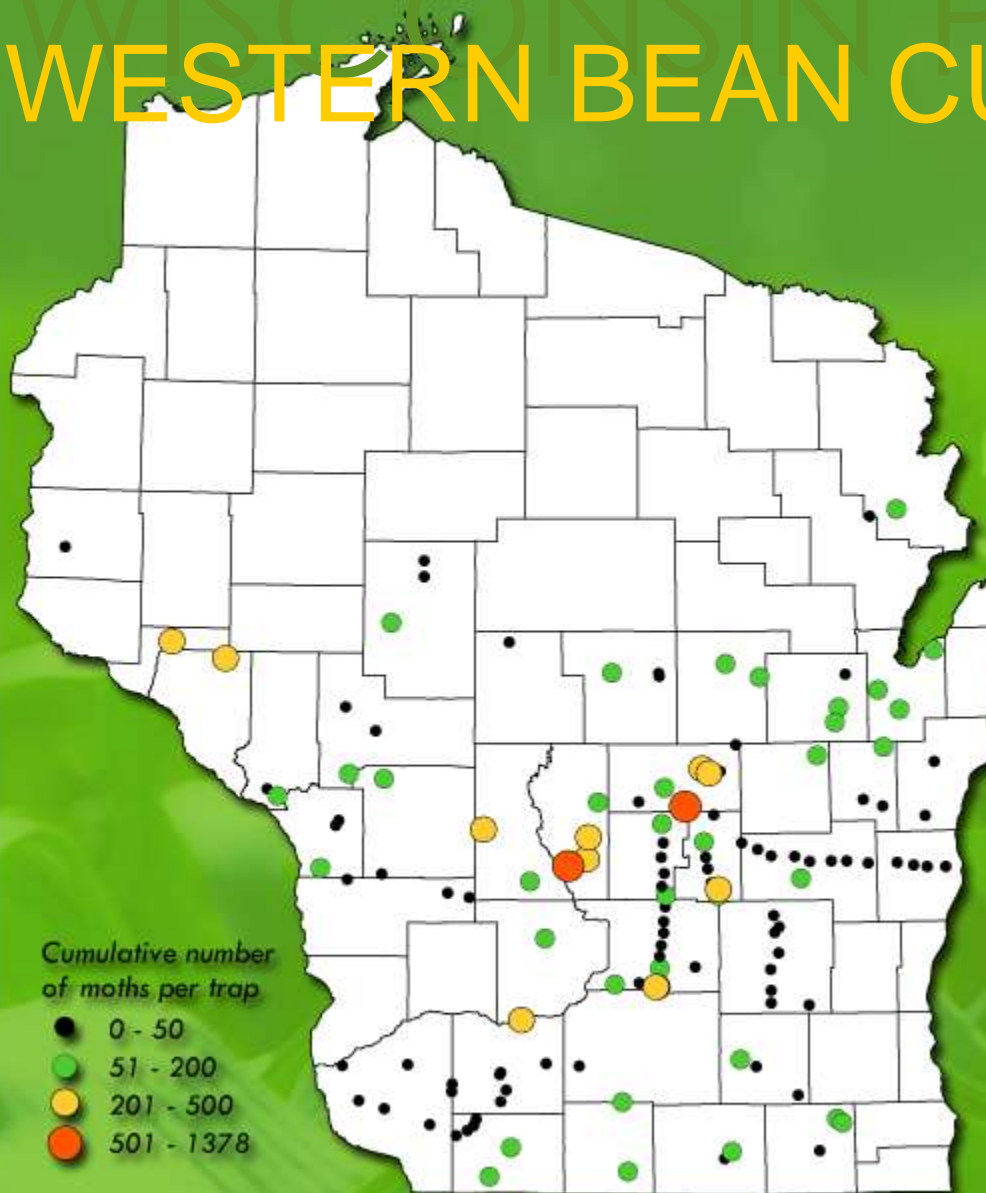
WESTERN BEAN CUTWORM



- Sixth annual trapping survey
- Total of 135 pheromone traps set in 38 counties
- Traps were monitored from mid-June through mid-August
- First moths registered on June 17

WISCONSIN PEST SURVEY

WESTERN BEAN CUTWORM



- Total moth count was **10,807** in 2010, a 54% increase from 4,928 moths in 2009
- 62% of traps = 0-50 moths
- 28% of traps = 51-200 moths
- 10% of traps = 201-1,378 moths compared to only 1% last year

WESTERN BEAN CUTWORM

- Peak flight occurred by July 22 at most sites, about 2-3 weeks earlier than in 2008 and 2009
- State total moth count has doubled annually since 2008—10,807 moths trapped in 2010, compared to 4,928 in 2009 and 2,433 in 2008
- Average number of moths per trap was 80 in 2010, compared to 35 in 2009, and 22 in 2008
- Highest trap counts continue to be registered in the central and south-central counties of Adams, Columbia, Green Lake, Marquette, Waushara, etc.

WBCW OUTLOOK FOR 2011



- Moth counts and infestations have increased substantially since 2005
- WBCW appears to be replacing other ear-infesting caterpillars killed by Cry1Ab endotoxin (in YieldGard and Agrisure hybrids)
- Only corn hybrids with the Bt protein Cry1F control WBCW
- Begin scouting at 1,320 gdd

WISCONSIN PEST SURVEY

TRUE ARMYWORM OUTBREAK



- Outbreak in wheat began by June 16
- Heaviest infestations occurred in Brown, Calumet, Fond du Lac, Green Lake, Washington and Winnebago counties
- Approx 14,000 acres were treated by July 2
- Of the 45 fields checked, 12% were moderately-heavily infested, 35% had been treated, and 53% had no larvae



WISCONSIN PEST SURVEY

TRUE ARMYWORM OUTBREAK



- Migrants arrived on May 4-5 (183 moths caught at Janesville)
- Large moth flights precede larval outbreaks by 3-4 weeks
- Heavy rains caused lush wheat growth and lodging, favoring armyworm infestations

WISCONSIN PEST SURVEY ARMYWORM OUTLOOK FOR 2011

- Damage is sporadic and dependent on migrations from the southern U.S.
- Armyworm development and outbreaks favored by cool, wet spring weather
- Pay attention to black light trap counts
- Spot check fields for larvae, especially areas with lodging

WISCONSIN PEST SURVEY

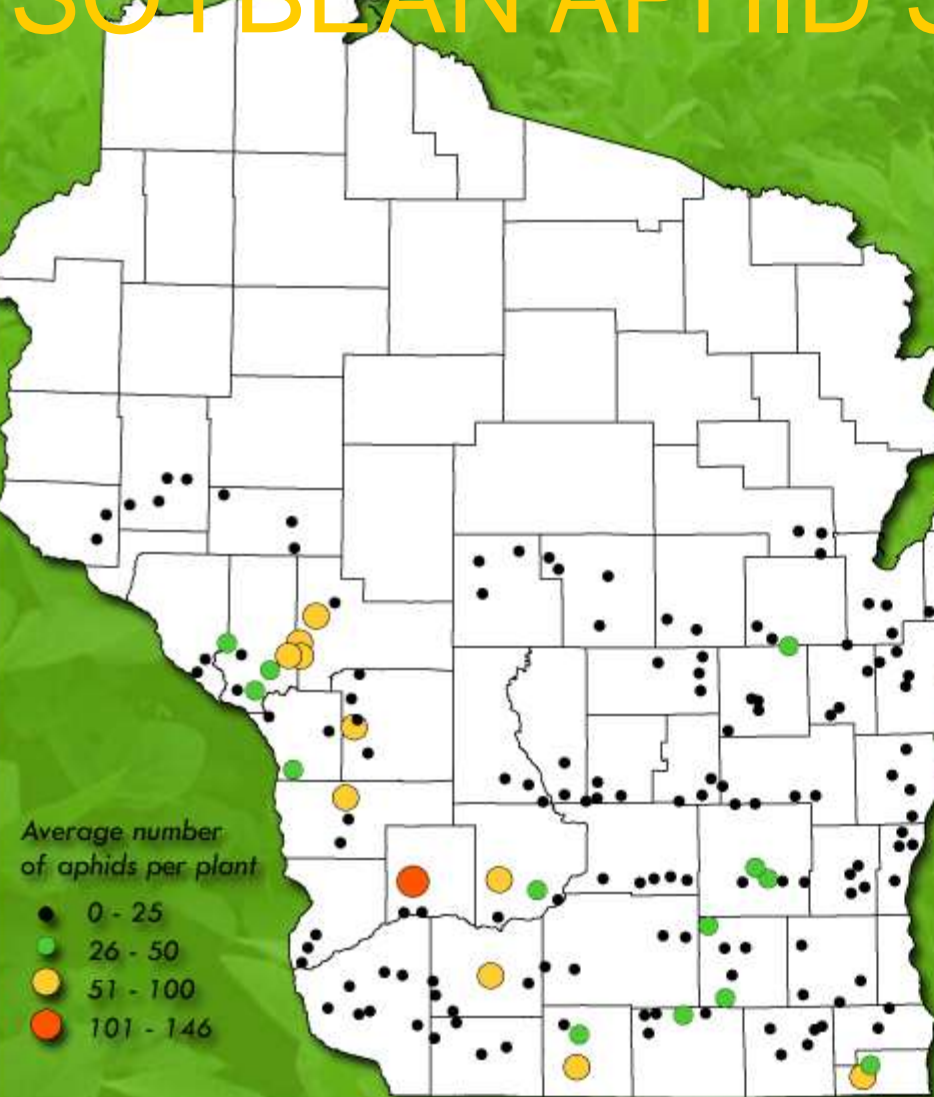
SOYBEAN APHID SURVEY



- Densities were unusually low throughout 2010
- Populations had been decimated by a fungal disease in fall of 2009
- Heavy rain, high temperatures, and natural enemies kept populations in check

WISCONSIN PEST SURVEY

SOYBEAN APHID SURVEY



- 168 soybean fields surveyed
- State Ave. No. Aphids per Plant:

2010	16	2006	69
2009	53	2005	118
2008	70	2004	11
2007	164	2003	758
- 85% had < 25 per plant
- 15% had 26-146 per plant
- None had ≥ 250 per plant

WISCONSIN PEST SURVEY

SOYBEAN APHID OUTLOOK 2011

- Risk for 2011 is unclear
- Fall suction trap counts were low, indicating few aphids initially next season
- Fall egg surveys suggest the aphids successfully colonized buckthorn
- Higher populations likely for 2011, but potential for economic densities depends on weather, planting dates, etc.

WISCONSIN PEST SURVEY

SOYBEAN DEFOLIATORS



GREEN CLOVERWORM



CELERY LEAFTIER

WISCONSIN PEST SURVEY

GREEN CLOVERWORM 2010



- Defoliation noticed by mid-July
- Infestations common statewide by August, many soybean fields in the south-central and south-west were treated
- Damage moderated by mid- to late August

WISCONSIN PEST SURVEY

CELERY LEAFTIER 2010



- Moths were abundant in lawns, gardens, at lights and in soybean fields by mid-July
- Nearly all soybeans checked in August were heavily infested
- Larvae eat flowers, weeds and vegetable foliage—are not a threat to field crops

WISCONSIN PEST SURVEY

SOYBEAN DEFOLIATORS 2011

- Reason for their abundance in 2010 is unknown, possibly due to tropical weather and low populations of natural enemies
- Will the celery leaf-tier become more common in the future?

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